

Study Guide Expressions and Plotting Points

Key

Name _____

per. _____

Learning Target 1: Connections (12 points)

1.) Your allowance is \$10 a week plus an additional \$0.50 for any extra chores you do.

a.) Circle the best answer: $10 + 0.50c$ is an: expression/equation where c stands for the number of chores you do in a week.

b.) How many **terms** are there? 2

c.) What is the **variable**? Why does it change? c - it changes bec

2.) The table shows the number of miles you have traveled based on the number of hours that have passed.

a.) Fill in the missing numbers in the table.

Time (hours)	0	1	2	3	4	5	6
Distance (miles)	5	65	125	185	245	305	365

$\underbrace{\quad\quad\quad}_{+60}$
 $\underbrace{\quad\quad\quad}_{+60}$
 $\underbrace{\quad\quad\quad}_{+60}$
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b.) How fast are you going in miles per hour? 60 mph

3.) You are making a list of school supplies. You need supplies for **three classes**. Each class requires 2 folders and 1 notebook. How many of **each supply** do you need?

$3(2 \text{ folders} + 1 \text{ notebook})$

$6 \text{ folders} + 3 \text{ notebooks}$

Learning Target 2: Problem Solving (24 points)

Evaluate the expression if $x = 1$, $y = 3$, and $z = -15$.

4.) $x + 1$

$\boxed{2}$

5.) $xz + 3y$

$(1)(-15) + 3(3)$
 $-15 + 9 = \boxed{-6}$

6.) $\frac{z}{y}$ $\frac{-15}{3}$
 $\boxed{-5}$

7.) $4(x - 2y)$

$4(1 - 2 \cdot 3)$
 $4(1 - 6)$
 $4(-5) = \boxed{-20}$

Simplify by combining the like terms in these expressions.

8.) $2s + 3p + p - 2s + 4$

$0s + 4p + 4$
 $\boxed{4p + 4}$

9.) $-2x^2 + 1 + 2x - 3x^2 - 6$

$\boxed{-5x^2 + 2x - 5}$

Write an equivalent expression using the **distributive property**.

10.) $5(6x + 3)$

$\boxed{30x + 15}$

11.) $-3(6r + 4s)$

$\boxed{-18r - 12s}$

12.) $-(2w - 7)$

$\boxed{-2w + 7}$

*make everything opposite